INDEX

	Page
Opinions below	1
Jurisdiction	2
Question presented	2
Statutes involved	2
Statement	3
1. The background facts—regulation of production in the Kansas Hugoton field	4
2. The facts of this case	12
3. Proceedings in the courts below	15
Argument	17
Conclusion	31
Appendix A	32
Appendix B	34
Appendix C	37
Appendix D	55
Appendix E	56
Appendix F	58
Appendix G	61

CITATIONS

Cases:	
Aquilino v. *United States*, 363 U.S. 509	22
Cities Service Gas Co. v. *State Corp. Commission of Kansas*, 355 U.S. 391	23, 30
Natural Gas Pipeline Co. v. *Panoma Corp.*, 349 U.S. 44	23
Northern Natural Gas Co., v. *Republic Natural Gas Co.*, 172 Kan. 450, 241 P. 2d 708	13
Phillips Petroleum Co. v. *Wisconsin*, 347 U.S. 672	23, 24

Cases—Continued
Republic Natural Gas Co. v. *Northern Natural Gas Co.*, Nos. 4165 and 4235, now pending in the District Court of Stevens County, Kansas ..... Page 22
Statutes:
Kansas Gen. Stat. 55–703 (1959 Supp.) 5
Natural Gas Act, 52 Stat. 821, 15 U.S.C. 717, *et seq.* 2, 3, 23, 30
Miscellaneous:
Kansas State Corporation Commission, *Twenty-Fourth Biennial Report*, pp. 214–221 (containing Report and Order issued January 22, 1958) 6, 7, 8

In the Supreme Court of the United States

OCTOBER TERM, 1962

No. 62

NORTHERN NATURAL GAS COMPANY, A CORPORATION, APPELLANT

v.

THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS, APPELLEE

ON APPEAL FROM THE SUPREME COURT OF THE STATE OF KANSAS

MEMORANDUM FOR THE FEDERAL POWER COMMISSION AS AMICUS CURIAE

OPINIONS BELOW

The opinion of the Supreme Court of Kansas in Case No. 42,128 is reported at 188 Kan. 355, 362 P. 2d 599 (R. 157), and its opinion denying rehearing at 188 Kan. 624, 364 P. 2d 668 (R. 187). The District Court of Finney County, Kansas, rendered no opinion. Its judgment is set forth at R. 112. The order of the Kansas Corporation Commission (R. 99) is not reported.

The opinion of the Supreme Court of Kansas in Case No. 42,127 is reported at 188 Kan. 351, 362 P.

2d 609 (R. 36). It rendered no opinion on rehearing. The District Court of Finney County, Kansas, rendered no opinion. Its judgment is set forth at R. 26. The order and rule of the Kansas Corporation Comission (R. 14–17) are not reported.

JURISDICTION

The Supreme Court of Kansas affirmed the judgment of the District Court in both cases on June 10, 1961. It denied rehearing on August 31, 1961, in No. 42,128 and on September 19, 1961, in No. 42,127. Notice of appeal in both cases was filed in the Supreme Court of Kansas on November 17, 1961, and the Jurisdictional Statement was filed in this Court on January 12, 1962. This Court noted probable jurisdiction on May 28, 1962 (370 U.S. 901). The jurisdiction of this Court is based on 28 U.S.C. § 1257 (2).

QUESTION PRESENTED

Whether orders of the Kansas Corporation Commission, directing each interstate pipeline to purchase gas at a uniform rate from all wells in the same reservoir to which it is connected, constitute a forbidden regulation of sales in interstate commerce, if the consequence is to force Kansas gas upon the interstate market and to cause pipelines to incur contract penalties which must be borne, in the form of increased rates, by the ultimate consumers of natural gas in other states.

STATUTES INVOLVED

The provisions of the United States Constitution, the Natural Gas Act, and the Kansas General Stat-

utes which bear upon the issues of this case are set forth in the brief of appellant Northern Natural Gas Company.

STATEMENT

Appellant Northern Natural Gas Company (hereinafter called "Northern") is a corporation engaged in the purchase, transmission, and sale of natural gas[1] in interstate commerce for ultimate public consumption (R. 18–19),[2] and is therefore a "natural-gas company" within the meaning of the Natural Gas Act. 15 U.S.C. 717a, 52 Stat. 821. One of its most important sources of supply is the Kansas portion of the Hugoton natural gas field, where its pipeline is connected to more than 1,100 wells (R. 75–76) at locations ranging from the northernmost to the southernmost ends of the Kansas portion, a distance of more than 80 miles. In this case Northern attacks orders of the Kansas Corporation Commission requiring it to purchase gas "ratably" from all wells to which it is connected in the Hugoton field—*i.e.*, to purchase from each well the same percentage of the allowable production of that well as it purchases from every other well. The purpose and significance of these orders can only be understood in the larger context of the Kansas Commission's continuing regulatory policy in the Hugoton field, a brief description of which follows.

---

[1] Although a wholly owned subsidiary of Northern's is engaged in the production of gas, Northern itself is not a producer.

[2] "R." refers to the Transcript of Record in this Court.

1. THE BACKGROUND FACTS—REGULATION OF PRODUCTION IN THE KANSAS HUGOTON FIELD

The Hugoton natural gas field is a single reservoir, or "source of supply," covering parts of Oklahoma and Texas, as well as Kansas. The Kansas portion of the field (hereinafter called the "Kansas Hugoton" field) extends about 85 miles northward from the Oklahoma border, not far from the western boundary of Kansas, and is about 60 miles wide. Because the Hugoton field is a single reservoir, a well or group of wells located in any region of it is a potential drain upon all the other wells in the field. The movement of gas within a common reservoir is governed by pressure differentials, the gas migrating from areas of higher pressure to areas of lower pressure. If gas is removed from a reservoir through a given well, the pressure level in the vicinity of that well is reduced, and the remaining gas tends to flow toward the area of reduced pressure until the presure level of the entire pool has again become uniform. Thus, it is theoretically possible to extract from a single group of wells all the recoverable natural gas in the common source of supply, with resultant exhaustion of the unproductive or less productive wells in the field (see R. 51–52).

Each of the three States in which the Hugoton field lies has a commission which is authorized by State law to regulate the production of oil and gas within the respective State boundaries, in the interest of conserving the minerals and protecting the correlative rights of the owners of the overlying land. The Kansas State Corporation Commission, as part of its conservation responsibility, is empowered, when-

ever the available production of gas from a common source exceeds the market demand for that gas, to prorate to each producer the amount that it is allowed to withdraw each month. The maximum permissible production for each well is termed its "allowable." The Commission's power to establish the allowable for each well is designed "to prevent the inequitable or unfair taking from such common source of supply by any person, firm, or corporation and to prevent unreasonable discrimination in favor of any one common source of supply as against another and in favor or against any producer in any such common source of supply." In establishing the allowables, the Commission is authorized to consider "acreage, pressure, open flow, porosity, permeability and thickness of pay, and such other factors, conditions and circumstances as may exist in the common source of supply under consideration at the time, as may be pertinent." Further, "in determining the market demand for gas from a common source of supply," the Commission must consider, among other things, "the reasonable current requirements for current consumption and use within and without the state, and such other factors, conditions, or circumstances that would aid in establishing the market demand." Kansas Gen. Stat. 55–703 (1959 Supp.).

In March 1956, the Kansas Commission issued an order directing purchasers of natural gas in the Kansas Hugoton field to show cause why they should not be required to take gas ratably from the various wells in that field. The extensive public hearings which followed culminated in a report and order issued Janu-

ary 22, 1958[3] (hereinafter called "the 1958 order"), the effect of which was to change the method of proration which the Commission had consistently followed during the period 1944–1956.[4] Prior to 1956 it had been the Commission's practice to equate "market demand"—by far the most important factor in computing allowables—with the nominations by purchasers of the amounts they expected to take from the Hugoton field during the ensuing six-month period. See *Twenty-Fourth Biennial Report*, p. 216; App. C, *infra*, p. 43.

In its 1958 order, however, the Commission ruled that "market demand" would not be determined solely by reference to purchaser nominations. Noting that the Oklahoma portion of the reservoir was being depleted approximately twice as fast as the Kansas portion, and the Texas portion at an even higher rate (with consequent drainage to those States from Kansas), it decided that "market demand" would be determined in the future not only on the basis of pur-

[3] The Report and Order is published in the *Twenty-Fourth Biennial Report of the Kansas State Corporation Commission*, pp. 214–221, and is reproduced in full in Appendix C, *infra*, pp. 37–54. It will hereafter be cited as "*Twenty-Fourth Biennial Report*", and page references will be given both to the published version and to Appendix C.

[4] During the course of the hearings—from April 1956 through November 1957—the Commission issued monthly proration orders and reports, which it denominated "Interim Orders." These orders fixed allowables for the current month, but were not determinative of any of the issues pending in the proration proceeding. See *Twenty-Fourth Biennial Report*, pp. 216–217; App. C, *infra*, pp. 41–42.

chaser nominations, but also on the basis of other factors, including:[5]

> (1) Takes from other sources of supply to which the purchasers are connected;
>
> (2) The total markets for natural gas of all purchasers from the Kansas-Hugoton Field; the rate of increase therein compared to the rate of increase in the takes from the Kansas portion of the Hugoton Field.

The 1958 order made certain other changes in the pre-1956 proration formula. Until 1956, current allowables for the Kansas Hugoton field were arrived at by taking "market demand," adding to it the "cancelled underages"[6] of the preceding month, and then subtracting from the total the amount of underproduction (excess of allowables over production) recorded for the preceding month. By means of this self-correcting mechanism, any reduction in total purchases from the field would call forth a corresponding reduction in the following month's allowables, thereby maintaining the intended relationship between market demand and allowable production. In the 1958 order the Commission criticized the pre-1956 formula on the ground that it enabled the pipeline companies, by adjusting the level of their monthly purchases, to exercise virtually complete control over the level of the allowables. Accordingly, it modified the formula by providing that in future the "net allowables" for the

---

[5] *Twenty-Fourth Biennial Report*, p. 218; App. C, *infra*, p. 44.

[6] Wells which do not produce their allowables in a particular month are allowed to carry over this "underage" and make it up in subsequent periods, until the total accumulated underage exceeds a certain level, after which the excess is cancelled.

Hugoton field would be computed by taking the "current allowables" (market demand plus the cancelled underages of the preceding month) and *adding*, rather than subtracting, the preceding month's net underproduction.[7]

That the purpose of the 1958 proration order was, in large part, to increase Kansas production at the expense of Oklahoma is evidenced by the following excerpt from the concurring opinion of Chairman Beatty (*id.* at pp. 218–220; App. C, *infra*, pp. 49–51):

> Intervenors have urged us to continue the practice of setting high monthly allowables which was started by the Commission in April, 1956. They have asked us to increase the allowables 25% more even though the Commission since April, 1956, has been allowing somewhat more than the market actually absorbed. This benefited pipe line companies in need of gas, usually those overproduced. It was coercive on those who did not have proportional markets, those usually underproduced. It has not been effective so far, but if and when it has the intended effect of forcing higher takes, it will allow the producers and royalty owners to convert their minerals into cash more quickly. The only visible results in the last nineteen months, however, have been no increase in takes and a gradually mounting net underage. The net allowable is now 52 million M.c.f. higher than the amount that will be actually taken and marketed this month, but if it is carried for awhile,

---

[7] *Twenty-Fourth Biennial Report*, pp. 219–220; App. C, *infra*, pp. 37–47.

the pipe line companies may find a market for it.

* * * * *

I am most heartily in favor of Kansas resources being harvested and marketed by Kansas people and Kansas industries, rather than by Oklahomans, and my sympathies are with the Kansas royalty owners, some of whom have had to sell their birthright to the pipe line companies for a mess of pottage (as low as 3¢ to 8¢ per M.c.f.) and are now having the pottage rationed to them in small spoonfuls, but whether we, a conservation commission, should try to force the sale and depletion of our natural gas at today's low prices, raises another question. Gas is a most desirable fuel. America's reserves of natural gas are being depleted one hundred times faster than our coal reserves. Aside from the question of our authority and jurisdiction to execute such a program under present conservation statutes, such a program may, in retrospect, prove to be very unwise, considering the welfare of the state as a whole.

Despite Chairman Beatty's recognition that the mere raising of the allowables had "not been effective so far" in "forcing higher takes," the Commission continued to consider factors other than the purchasers' nominations in determining "market demand." Thus, in its order of October 8, 1958,[8] determining market demand for proration purposes, the Commission found that the pipelines' nominations

[8] Copies of this and other pertinent orders of the Kansas Commission discussed, *infra*, are being filed with the clerk of this Court.

totalled 238,634,540 Mcf for the six months ending March 31, 1959, and that this total was lower than the nominations for the same periods of the two preceding years. It found that "the consumptive market of the purchasing pipeline companies has increased" since March 31, 1958, and noted evidence that

> * * * if the five largest purchasers (purchasing pipeline companies) would take gas from the Kansas Hugoton Gas Field at the same rate based on comparative gas reserves as they now do from the other sources to which they are connected, the Kansas Hugoton Gas Field's fair share of the markets would be 676,904,000 M.c.f. for a twelve months' period. This indicates that the market demand for the next six months would be approximately 430,000,000 M.c.f. * * *

The Commission ultimately fixed total current allowables for the six-month period at 255,000,000 Mcf, or more than 16 million Mcf above the pipelines' estimates.

In the next order, dated April 22, 1959, fixing allowables for the six months from April 1 to September 30 of that year, the Kansas Commission again found that the pipelines' nominations of 169,451,200 Mcf did not reflect the "fair market demand" for the Kansas Hugoton field. Evidence showed that, if the five largest purchasers took gas from that field at the same rate relative to reserves as from their other connections, the field's share would be 241,519,000 Mcf. Evidence also showed that the Kansas Hugoton reserves of the four leading purchasers amounted to 44% of their total reserves, but that these companies were supplying only 23% of their over-all markets with Kansas

Hugoton gas. Although evidence as to drainage of gas from Kansas into Oklahoma was conflicting and inconclusive, the total allowables were fixed at 175,000,000 Mcf, or 5,548,800 Mcf above the pipelines' nominations.

In the next order, dated November 10, 1959, fixing allowables for the six months to March 31, 1960, the Commission declared:

> Nominations and runs are often controlled or influenced by contracts between the producers and purchasers. These contracts do not necessarily bear any relationship to the market demand for gas from the Kansas Hugoton Gas Field or any gas field, and they are not binding upon the Commission in carrying out its regulatory duties.

In each subsequent proration order, the "market demand" has been based on considerations similar to those stated in the orders discussed above, and each time allowables have exceeded the nominations of the pipelines. Each order has contained findings that the Commission is not bound by the contractual relationships between producers and purchasers; that the Kansas Hugoton field is not getting its fair share of the purchasers' markets; and that purchases have been lower, in proportion to reserves, in Kansas Hugoton than elsewhere.

The Kansas method of determining allowables is in striking contrast to that employed in the Oklahoma portion of the Hugoton field, where allowables have regularly been kept closely in line with production. The comparative figures are:

Year ended Sept. 30:	Hugoton Gas Field Production as % of allowables[*] Kansas	Oklahoma
1957	94.0	99.2
1958	89.5	98.3
1959	84.4	101.5
1960	91.7	100.8
1961	91.3	97.3

Thus, while the Oklahoma allowables have been linked tightly to the pipelines' demand for gas from the Oklahoma portion of the field, the Kansas Hugoton allowables reflect in part the Kansas Commission's estimate of the State's "fair share" of the markets of the pipelines.

2. THE FACTS OF THIS CASE

In 1945, Northern entered into a gas purchase contract with Republic Natural Gas Company (referred to as the "Republic 'A' Contract") under which it buys the gas from 144 wells owned by Republic in the Kansas Hugoton field (R. 69–70). Under this contract, Northern agreed to buy, and Republic to sell, 60 percent of the gas required by Northern in serving certain specified portions of Iowa and Nebraska, known as "The Omaha District." The aggregate volume of gas was to be not less than 12.5 billion nor more than 36.5 billion cubic feet per annum (R. 71–72).

The Kansas Hugoton gas field was placed under proration by the State Corporation Commission of Kansas, effective April 1, 1944 (R. 74). Although

---

[*] Percentages computed from figures for production and allowables for Kansas and Oklahoma, respectively, shown by their respective State Corporation Commission monthly Gas Proration Orders and Reports for the years indicated.

at first the allowables assigned to the Republic "A" wells were high enough to permit Republic to deliver to Northern 60 percent of Northern's requirements for serving the Omaha District, those requirements had so increased by 1947 that the contract commitment exceeded allowables (R. 74). In 1952, in *Northern Natural Gas Co.* v. *Republic Natural Gas Co.*, 172 Kan. 450, 241 P. 2d 708, the Kansas Supreme Court determined that Northern should arrange its purchases from the Republic "A" wells in such a way that at the end of each contract accounting year it would have taken the full legal allowables assigned to those wells by orders of the Kansas Commission.

Meanwhile, Northern had contracted for additional supplies of gas from other acreage in the Kansas Hugoton field. Each of these gas purchase contracts requires Northern to purchase and receive gas from the wells covered thereby ratably with all other wells connected to its pipeline in the Kansas Hugoton field except the Republic "A" wells, which are expressly excluded from the ratable-take provisions in the other contracts (R. 76–78).

During the period from April 1944, until the spring of 1958, Northern's purchases from the Republic "A" wells were at or near the allowable level, as were the purchases from wells of its other suppliers in the Kansas Hugoton field (R. 83–84). In the spring of 1958, however, when the Kansas Commission changed its method of fixing allowables, the take from the Republic "A" wells remained reasonably close to the allowable level of production, while the take from the other

wells, in contrast, declined sharply.[10] A witness for Northern attributed this development to two factors: (1) the allowables granted by the State Commission to the field as a whole far exceeded total field production; and (2) the company had not received from the Federal Power Commission certificates of public convenience and necessity permitting as rapid an expansion of its system as had been expected (R. 84–85). When the total of allowable production is fixed substantially higher than the market, only the Republic "A" wells (from which Northern is contractually obligated, subject to valid proration orders, to purchase 60% of its Omaha District requirements) produce current allowables, while the other wells connected with Northern (with which it has no such contractual minimum-take obligation) ratably produce the balance of the demand (R. 87). The level of Northern's markets at the time of the hearings did not make it necessary for it to take the full current allowables from all its connections in the Hugoton field (R. 88).

On May 27, 1959, the Kansas Commission issued a show cause order directing that a hearing be held to determine whether Northern should be required to take ratably from all the wells connected to it in the Hugoton field. The order (R. 66–67) recited that evidence indicated that Northern had not been taking the full allowables, and had not taken ratably from its

[10] R. 83–84. Thus, in 1959, as shown, *infra*, p. 26, Northern's purchases from the Republic "A" wells amounted to 86.19% of allowables, while its takes from the other connected wells totaled only 53.61% of allowables.

connecting wells. The order of October 7, 1959, which resulted from these hearings (R. 99–101; App. A, *infra*, pp. 32–33), directed it to take ratably from all its connected wells in the Kansas Hugoton field. It is this order which was the subject of Case No. 42,128 in the Kansas Supreme Court.

The record on which this order was based was incorporated into the record of a hearing held January 21, 1960 (R. 7–13) and, with other evidence, resulted in promulgation of the rule, effective February 8, 1960, which is the subject of Case No. 42,127. That rule requires each purchaser from a common source of supply to take gas ratably in proportion to the allowables from all wells with which it is connected (R. 17–18; App. B, *infra*, pp. 34–36).

3. PROCEEDINGS IN THE COURTS BELOW

On appeal, both the trial court and the Supreme Court of Kansas sustained the Commission's order and rule. A divided Supreme Court upheld the order directed to Northern (Case No. 42,128) on the ground that it served to protect the owners of the "underproduced" wells, who were suffering drainage to the Republic "A" wells; that it is proper for the State Commission to require purchasers from a common source of gas supply to take ratably from all wells with which they are connected; and that the order imposes no burden on interstate commerce since it does not require Northern to take any particular amount of gas, but only to take ratably from all its connections (R. 157–166). The court also upheld the rule directed to all gas pur-

chasers (Case No. 42,127), stating that if the Commission could lawfully issue a ratable-take order addressed to one company, *a fortiori* it could make a general rule having the same effect on all companies (R. 36–41).

In his dissent in Case No. 42,128 (R. 166–175), Schroeder, J., pointed out that the entire difficulty arose from the discrepancy existing since 1958 between the total market demand and the total of the allowables, and that if allowables had in fact been fixed at the level indicated by the market, the rate of take would be the same from the Republic "A" wells as from Northern's other connections in the field. The Kansas gas conservation statute, he said, was intended to operate on the producer, not the purchaser, and the Commission exceeded its statutory authority in adopting the order.

In denying Northern's motion for rehearing, the court handed down an opinion further explaining its decision (R. 187–189). This case, it said, in no way involves the price of gas; the only important thing is that the purchaser take the gas so that it may be produced, and that he take ratably from all wells to which he is connected. The opinion ends with the following paragraphs (R. 188–189):

> Northern has in this case cast some reflection upon the increase of allowables in 1958 by the Kansas Commission. The record contains no facts concerning this action of the Commission. But we must assume that the Commission believed that the market was sufficient to warrant the increase. Moreover, if we are justified in taking judicial notice of

facts, we must also assume that the Kansas allowables were not greater than the Oklahoma allowables. And we notice that it was generally thought to be a fact that drainage of gas was occurring from the Kansas Hugoton field to that part of the field in Oklahoma.

Thus, in 1958, the Commission may have been, in a roundabout way, endeavoring to set up ratable taking as between Kansas wells and Oklahoma wells by increasing the allowables of the Kansas wells.

Of course, none of this is involved in the record of the case before us. However, we may direct attention to the news story on page 54, in *Newsweek* for July 10, 1961, entitled *Natural Gas: Two Straws.* It is there noted that the Hugoton field covers some 4.1 million acres in Kansas, Oklahoma and Texas; that most of the estimated 300 trillion cubic feet of gas in the field lies under Kansas soil, but that Oklahoma supplies the major share of the 2 million cubic feet pumped daily northward through the pipe lines.

The motion for rehearing is denied.

ARGUMENT

1. In response to evidence that producers in the Oklahoma and Texas portions of the Hugoton field were enjoying a larger share of the interstate market than producers in the Kansas portion, and that Oklahoma wells were draining Kansas wells, the Kansas Commission initiated a proceeding in early 1956 to correct the imbalance. By a series of proration orders, culminating in the order of January 22, 1958, App. C., *infra,* pp. 37–54, it changed its traditional

method of fixing "allowables" for the Hugoton field. The allowable assigned to each well for any given six-month period was no longer to be its appropriate share of the total estimated market demand for the field, as adjusted monthly by actual experience, but rather its appropriate share of a larger total which represented the Kansas Commission's views of what Kansas' share of the interstate market *ought* to be. In attempting, however, to increase total Kansas production by assuming the increase would occur, the Commission inevitably promoted inequalities among Kansas producers themselves, for while the new proration method enabled some wells—*i.e.*, those previously straining at the limits of their allowables, to produce more gas, it had no impact whatever on those wells which, even under the old system of proration, were already fully satisfying the requirements of the pipelines to which they were connected. In any event, as Chairman Beatty of the Kansas Commission observed (*supra*, p. 8), the new method proved ineffective in "forcing higher takes" and thus securing to Kansas producers a larger share of the interstate market. This, of course, was hardly surprising so long as no pipeline was under any compulsion to take all or any prescribed portion of the allowables assigned to its connected wells.

In October 1959 and February 1960 the Kansas Commission, by the orders here in issue, required Northern (and subsequently every other pipeline) to take ratably from all wells supplying it in the same field. In light of the regulatory history summarized in the Statement, *supra*, pp. 5–12, we have interpreted these orders as an effort to exert leverage upon inter-

state pipeline companies to increase their takes from Kansas wells. Specifically, we have assumed that the orders leave intact Northern's contract obligation to take (or at least pay for) a minimum volume of gas from the Republic "A" wells; otherwise, the requirement of ratable-taking might be satisfied through a reduction of Northern's purchases from Republic (coupled, perhaps, with an equivalent increase in takes from Oklahoma and Texas producers), to the detriment of the total production of the State of Kansas. On this assumption, *i.e.*, that the minimum-take provision of the Republic "A" contract remains in force, Northern, in order to comply with the regulation, must adopt one of two courses, either of which would result in increased revenues for Kansas producers and royalty owners (and also, as we show, *infra*, pp. 25–30, increased rates for the ultimate consumers in other States). On the one hand, Northern might raise its takes from its other Kansas suppliers to the level at which it is obliged to purchase from the Republic "A" wells, making corresponding reductions in its takes from Oklahoma and Texas producers. Operating in this way, the regulation here in question would be equivalent to a general minimum-take order, requiring each pipeline to take from all its suppliers at the highest rate which it is required by contract to take from any of them. Alternatively, Northern might maintain its existing volume of purchases from the Kansas Hugoton field, reducing its takes from the Republic "A" wells and increasing its takes from its other connections. In that event, the increase in revenues to Northern's "other" suppliers would not be

offset by any reduction in revenues to Republic, for Northern would still be obligated to pay for the contract volumes *not* taken.

These consequences, of course, would flow from the Kansas orders only on the assumption that the minimum-take provision of the Republic "A" contract remains in force. In its reply to the government's memorandum filed at the petition stage (pp. 4–5) appellee insists, however, that under Kansas law the minimum-take provision is *pro tanto* modified by the Kansas Commission's orders, so that Northern is free to comply with the regulation by decreasing its takes from Republic without violating the contract or incurring penalties thereunder. Moreover, appellee attributes such a holding to the Kansas Supreme Court, pointing out that the court referred to language in the Republic "A" contract by which that contract was made subject "to all valid present and future orders, rules and regulations of duly constituted authorities having jurisdiction." (R. 164).

We do not urge that this Court resolve disputed questions of State law which lurk in this case. We point out, however, that as a matter of construction, there is, at the least, a serious question whether the orders have the effect ascribed to them by the appellee, since (a) neither of the orders purports, on its face, to reform the minimum-take provisions of private contracts; (b) the Kansas Commission has no express statutory authority to modify contracts; and (c) there is no unavoidable conflict between the orders and the minimum-take provision of the contract from

which one might infer the latter's invalidity. And while the Kansas Supreme Court did advert to the above-quoted language of the Republic "A" contract, it can scarcely be deemed to have held or even "indicated," as appellee suggests, that Northern was relieved of its minimum-take obligations, either by the regulation, *ex proprio vigore*, or by the terms of the contract itself.

We acknowledge that if it were authoritatively decided, as a matter of State law, that the Kansas orders release Northern from its minimum-take commitment, then the regulation would have no significant impact upon the rates paid by the consumers,[21] or the volumes produced and sold by producers, in other States. For Northern would then be free to comply with the orders by reducing its takes from the Republic "A" wells and increasing its takes from its other connections, without altering the total quantities purchased from Kansas suppliers and without incurring any liability for gas not taken. In that event, despite the fact that the Kansas regulation is in terms addressed to interstate pipeline companies rather than to Kansas producers, we would not urge that it so impinged upon matters of national, as opposed to local, concern, or that it so interfered with the regulatory functions and purposes of the Federal Power Commission un-

[21] Indeed, it appears that the rates paid by Northern under the Republic "A" contract were higher than those paid under other gas purchase contracts in the Kansas Hugoton field. See App. E, *infra*, p. 56. See also discussion at pp. 28–29, *infra*.

der the Natural Gas Act, as to require its invalidation under the supremacy clause.[12]

If the Court agrees with our suggestion that the validity of the Kansas orders may turn upon the subsidiary question whether, under State law, Northern (and pipelines similarly situated) are relieved of their contractual obligations to take minimum quantities of Kansas gas, it may wish to pretermit federal questions in this case until the disputed issue of State law has been resolved by the Kansas courts. In that event, we believe that the appropriate procedure would be to vacate the judgments below and to remand the cause to the Kansas Supreme Court for further proceedings.[13] See *Aquilino* v. *United States*, 363 U.S. 509, 515–516.

2. If the Kansas orders do *not*, as a matter of State law, relieve Northern of its contractual minimum-take

[12] In our earlier memorandum (pp. 2–3), we questioned whether the Kansas orders were reasonably related to the prevention of drainage and the protection of the correlative rights of all producers taking from the common reservoir. This was particularly relevant from the standpoint of deciding whether the purpose and effect of the Kansas orders were to force increased quantities of Kansas gas into interstate channels. But if Northern is in fact under no economic compulsion to take these increased quantities, that concern is removed.

[13] *Republic Natural Gas Co.* v. *Northern Natural Gas Co.*, Nos. 4165 and 4235, now pending in the District Court of Stevens County, Kansas, is an action for damages brought by Republic against Northern for its failure to purchase the minimum volumes of gas prescribed by the "Republic 'A' Contract." Under a remand from this Court, the Kansas Supreme Court would be free to resolve the State-law question noted above in the instant proceedings or to hold these proceedings on its docket pending resolution of the question in the contract litigation involving Republic and Northern.

obligations, the decision below should be reversed. The essence of our contention is that the orders, on that premise, would force Kansas gas into interstate channels and impose burdens, in the form of increased rates, upon consumers in other States.

Appellee argues that since the Natural Gas Act was not intended to deprive the States of any regulatory jurisdiction which was recognized as theirs at the time of the Act's passage in 1938, the true test of the validity of the Kansas Commission's actions is whether they would have been valid exercises of State power before Congress entered the field. It concedes, however, that the applicable constitutional standards are not those which now govern the scope of State power under the Commerce Clause but, rather, the somewhat stricter ones which were thought to prevail at the time the Natural Gas Act was passed.[14]

Assuming, for purposes of this case, that appellee's understanding of the applicable legal standard is correct, we suggest that it makes no difference whether the question of the validity of the Kansas regulation is approached by way of the supremacy clause ("Are the Kansas orders compatible with the legislative scheme of the Natural Gas Act?") or by way of the commerce clause in its 1938 dimensions ("Could Kansas have undertaken this regulation prior to the enactment of the Natural Gas Act?"). In either case the answer is the same. If the Kansas orders do not contemplate relief of Northern from its

[14] See *Phillips Petroleum Co.* v. *Wisconsin*, 347 U.S. 672, 685; *Cities Service Gas Co.* v. *State Corp. Commission of Kansas*, 355 U.S. 391; *Natural Gas Pipeline Co.* v. *Panoma Corp.*, 349 U.S. 44.

contractual obligations, their manifest purpose and effect are to regulate the purchases of interstate pipeline companies in such a way as to force Kansas gas upon the interstate market. Such regulation would invade an area which Congress has entrusted to the exclusive regulation of the Federal Power Commission; it would also go well beyond the States' historic power to adopt legitimate measures to conserve natural resources and protect the correlative rights of producers in a common source of supply. Thus, Mr. Justice Frankfurter, concurring in *Phillips Petroleum Co.* v. *Wisconsin,* 347 U.S. 672, 686, discerned in Section 1(b) the following legislative intent:

> "However, since sales for resale, or so-called 'wholesale sales,' in interstate commerce are not local in character and are constitutionally not subject to State regulation, see *Missouri* v. *Kansas Gas Co.,* 265 U.S. 298, and *Public Utilities Commission* v. *Attleboro Steam & Electric Co.,* 273 U.S. 83, the basic purpose of the legislation is to occupy this field in which the States may not act."

In determining whether the action of the Kansas Commission is a regulation of "production" or a regulation of sales in interstate commerce, it is surely relevant that the orders are, on their face, addressed to interstate pipeline companies, not local producers; that any criminal penalties which may be assessed for non-compliance will be assessed against the pipelines, not the producers; and that while the orders seek to assure an equitable distribution of interstate sales among wells attached to the same line, they would freely tolerate, and indeed enforce, unequal rates of production as between wells attached to different

pipelines in the common reservoir. We recognize, however, that these considerations, though relevant, are not decisive. The natural gas industry differs from other industries in that the production of the commodity (*i.e.*, the withdrawal of gas from the well) and its movement into interstate channels constitute one and the same physical operation. Thus, a regulation limiting the volume a pipeline may purchase from a given well would be tantamount in effect to a limitation upon the production of that well. In order, therefore, to determine whether the present orders fall within the "production and gathering" exemption of Section 1(b), it is necessary to look beyond their nominal subject matter and attempt to discern the degree and nature of their impact upon interstate commerce.

Measured by their practical consequences, the Kansas orders (still assuming that they provide no relief from contract obligations) are plainly a regulation of sales for resale in interstate commerce. For in order to comply with the regulation, Northern, it seems clear, would be forced to adopt one of two alternatives, either of which would inevitably result in higher rates to the ultimate consumers in other States.

(a) As one alternative, Northern might comply with the order by increasing its takes from other Kansas wells to the level of its purchases from the Republic "A" wells. In 1959—the last full year before the *general* rateable-take order here involved became effective—Northern's takes from all its connections in the Kansas Hugoton field were 84,229,577 Mcf, or 61.27% of the allowable production of those wells. Its takes from the Republic "A" wells were 21,941,199

Mcf, or 86.19% of allowables, while its takes from the other connected wells were 62,288,378 Mcf, or 55.61% of allowables.[15] For Northern to increase its "other" Kansas Hugoton purchases to the Republic "A" level of 86.19% of allowables, it would have to take 33,956,951 Mcf more than it did.[16] At the average price of gas from those wells (11.593587¢ per Mcf),[17] Northern would be spending some $4,000,000 extra per annum, contributing that much additional revenue to Kansas producers.

Having raised its takes from Kansas producers by 33,956,951 Mcf, Northern would have to reduce its takes outside Kansas by an equal amount, *i.e.*, from 379,250,577 Mcf to 345,293,626 Mcf.[18] A pipeline seeks to purchase what it needs; except in limited amounts, and for limited periods, it cannot accept gas for which it has no market. The reduction of Northern's gas takes outside of Kansas Hugoton, however, would not be accompanied by a proportionate reduction in the cost of that gas, for Northern's takes outside of Kansas Hugoton are sub-

[15] See App. D, *infra*, p. 55.

[16] The 33,956,960 Mcf figure is derived by subtracting Northern's actual 1959 Kansas Hugoton purchases (83,512,434 Mcf, as reported in Northern's 1959 Form 2 Report to the Federal Power Commission, which varies slightly from the 84,229,577 Mcf, *supra*, derived from Kansas Commission proration orders) from the amount it would have taken at the rate of 86.19% from all Kansas Hugoton wells (117,469,385 Mcf). These figures are shown in App. F, *infra*, pp. 59–60.

[17] The derivation of this figure is shown in App. F, *infra*, p. 58.

[18] For derivation of these figures see Appendix F, *infra*, pp. 58–59.

ject to minimum-take provisions which prevent reductions in volume from being reflected in reductions in cost. According to representations made by Northern [19] in a certificate proceeding, Docket No. CP62-85, now pending before the Federal Power Commission, its actual purchases outside of Kansas Hugoton in 1959 were only slightly above the minimum volume required to be taken under its purchase contracts. Those representations show that the volume required to be taken outside of Kansas Hugoton in 1960 was 389,764,236 Mcf,[20] as compared to the 379,250,577 actually taken in 1959. Thus, Northern would be compelled, under its out-of-Kansas contracts, to pay approximately the same dollar amount for its reduced takes there. It follows that if the result of the regulation here in issue is to cause Northern to increase its purchases in Kansas, Northern would be saddled with extra costs overall. These extra costs for purchased gas would be part of Northern's cost of service and as such would ultimately fall upon the consumers, who would underwrite the $4 million increase in revenue to Kansas producers.

(b) Northern's other alternative would be to comply with the Kansas orders by reducing its takes from the Republic "A" wells and increasing its takes from the other wells, without altering its overall rate

[19] See Appendix G, *infra*, pp. 61-68.

[20] This figure represents the total of the minimum volumes required to be taken from all fields to which Northern is connected (511,522,007 Mcf), as shown in Appendix G, *infra*, p. 66) minus the required minimum volume *imputed* to the Kansas Hugoton field (121,757,771 Mcf) by Appendix G, *infra*, p. 66.

of take for the Kansas Hugoton field as a whole. That course of action, however, would likewise result in higher revenues for Kansas producers at the expense of the ultimate consumer since, by virtue of the minimum-take provision in the Republic "A" contract, the reduction in volumes purchased from the Republic "A" wells would not lead to any reduction in costs. Northern—and, in turn, its customers—would have to pay for gas not taken.

The impact of the minimum-take provision upon Northern's rates can be illustrated by the actual figures for 1959. In that year, as we have seen, *supra*, pp. 25–26, Northern purchased 21,941,199 Mcf from the Republic "A" wells, or 86.19% of the full allowables, and hence the required contract minimum, for those wells. In 1959 the effective rate under the Republic "A" contract, on file with the Federal Power Commission as Republic's FPC Gas Rate Schedule No. 8, was 16.75 cents per Mcf. Thus, if Northern had been required to pay only for the gas which it actually purchased, it would have paid Republic a total of $3,674,951 (21,941,199 Mcf × 16.75 cents). However, Northern's annual report to the Federal Power Commission (FPC Form 2, 1959), submitted pursuant to Section 260.1, Regulations under the Natural Gas Act (18 C.F.R. 260.1), shows[21] that in 1959 it paid $4,272,421,[22] or approximately 19.5 cents per Mcf, for

[21] The pertinent portion of that report is reproduced as Appendix E, *infra*, p. 56. Data with respect to the Republic "A" contract are shown on the last line of the page.

[22] We are now advised by Northern that the full amount of the $4,272,421 shown in its report has not actually been "paid" to Republic. Instead, that portion which is attributable to gas required by contract to be taken, but not actually taken, was

the gas purchased under the Republic "A" contract. This dollar figure closely approximates the amount Northern *would* have had to pay at the official filed rate of 16.75¢ per Mcf, if it had taken the full allowables—*i.e.*, the full contract minimum—of 25,456,127 Mcf from the Republic "A" wells, rather than merely 86.19% thereof.[23] In short, although Northern took somewhat less, it was required to pay for the full Republic "A" contract minimum, with the result that the cost of the gas it did take increased from the filed rate of 16.75 cents to 19.5 cents per Mcf.

If the Kansas ratable-take orders had been in effect throughout the year 1959, and if Northern had sought to comply by purchasing gas from each of its connected wells in the Kansas Hugoton field at its overall average rate of 61.27% (see, *supra*, p. 25), its purchases from the Republic "A" wells would have been reduced, and its purchases from the other Kansas Hugoton wells increased, by 6,471,417 Mcf.[24] Since Northern, notwithstanding its reduced take, would have had to pay for the minimum Republic "A" contract volumes, its total costs would have been increased by the amount paid for the additional volume of gas

---

accrued on the Company's books as a contingent liability, pending resolution of the controversy between the parties as to the effect of the Kansas orders upon minimum-take obligations in the contract, see p. 22, *supra*, fn. 13. Since the figures are here being used only for purposes of illustration, it is immaterial whether Northern actually paid or merely accrued the indicated amount.

[23] The price for 25,456,127 Mcf at 16.75 cents per Mcf would be $4,263,901.

[24] Computed by subtracting the adjusted Republic "A" purchases (15,465,434 Mcf) from the actual purchases (21,936,851 Mcf), as shown in Appendix F, *infra*, pp. 58, 60.

taken from the other Kansas Hugoton wells. This increase in cost to Northern, and ultimately to Northern's consumers, would have been $750,269.[25]

In short, whether Northern proceeds under alternative (a) or (b) (or a combination of the two), the consequence is the same: Northern will be obliged to take or to pay for more Kansas gas than it can use. A scheme of regulation which carries with it the practical consequence that interstate pipelines must take increased quantities of gas from a State (or pay contractual penalties) cannot be regarded as a conservation measure or as a regulation within the boundaries of the "production and gathering" exemption set forth in Section 1(b) of the Natural Gas Act. Rather, it is a regulation of interstate commerce—one which stands on no better footing than the Kansas minimum price regulation which this Court has already held invalid. *Cities Service Gas Co.* v. *State Corp. Commission of Kansas,* 355 U.S. 391.

---

[25] The derivation of this figure is shown in Appendix F, *infra*, pp. 58–60, particularly p. 60.

CONCLUSION

We submit, for the reasons set forth above, that the judgments of the Supreme Court of Kansas should be vacated and the cause remanded to that court for determination, in accordance with appropriate State procedures, of the unresolved issues of State law.

Respectfully submitted,

ARCHIBALD COX,
Solicitor General.

JOSEPH D. GUILFOYLE,
Acting Assistant Attorney General.

RALPH S. SPRITZER,
FRANK I. GOODMAN,
Assistants to the Solicitor General.

RICHARD A. SOLOMON,
General Counsel,

HOWARD E. WAHRENBROCK,
Solicitor,

ARTHUR H. FRIBOURG,
Attorney,
Federal Power Commission,
Washington 25, D.C.

OCTOBER 1962.

662386—62——3

APPENDIX A

The Kansas Corporation Commission order of October 7, 1959, under review in Case No. 42,128 below is as follows (caption omitted):

ORDER

Now on this 7th day of October, 1959, the above-entitled matter comes before the Commission for further consideration and final disposition. The Commission (Harry G. Wiles, Chairman, Marion Beatty and Richard C. Byrd, Commissioners), having examined the record, exhibits, files and briefs of counsel, and being fully advised in the premises, finds:

1. That Northern Natural Gas Company is not taking ratably from its connections in the Kansas Hugoton Gas Field which is a common source of supply.

2. That Northern Natural Gas Company purchases part of its gas from Republic Natural Gas Company under a contract which shall be designated as the "Republic A" contract. That this "Republic A" contract requires Northern Natural Gas Company to take certain quantities of gas or pay for it even if not taken. That this "Republic A" contract has a further provision making it subject to all valid legislation and all valid orders, rules, and regulations of duly constituted authorities having jurisdiction.

3. That the wells dedicated by Republic Natural Gas Company to the fulfillment of this "Republic A" contract have been produced at a much greater rate (percentage of allowables) than other wells connected to the Northern Natural Gas Company system. That the dis-

parity in rates of production has been so great that many wells have accumulated sizeable underages while the wells producing under the "Republic A" contract are producing the current allowable and some are overproduced. That this is not ratable taking from a common source of supply.

4. That under the Gas Conservation Laws of the State of Kansas, G.S. 1949, 55-703, the Commission is given the duty and power to "so regulate the taking of natural gas from any and all such common sources of supply within this state as to prevent the inequitable or unfair taking from such common source of supply by any person, firm or corporation. * * *" This is also reflected in the Basic Order for the Hugoton Field.

5. That the right to enter into private contracts can not be used as a means to circumvent lawful orders of the Commission or valid laws passed by the Legislature. Therefore the fact that Northern Natural Gas Company may be contractually bound to take a certain quantity of gas from certain wells is not binding on the Commission in its duty to regulate the production of gas from the entire field.

6. That Northern Natural Gas Company should be ordered to take gas ratably from its connections in the Kansas Hugoton Gas Field.

It Is, Therefore, by the Commission Ordered: That Northern Natural Gas Company be and it is hereby ordered to take gas ratably from all wells to which it is connected in the Kansas Hugoton Gas Field.

The Commission retains jurisdiction of the subject matter and the parties for the purpose of entering such further order or orders and promulgating and implementing such further rules and regulations as from time to time it may deem proper.

By the Commission, It Is So Ordered.

[SEAL] RAYMOND B. HARVEY, *Secretary.*

APPENDIX B

The Kansas Corporation Commission order of February 3, 1960 and the rule appended thereto as Exhibit "A", which are under review in Case No. 42,127 are as follows (caption omitted):

ORDER

Now on this 3rd day of February, 1960, the above-entitled matter comes on for consideration and determination by the State Corporation Commission, hereinafter referred to as the Commission. The Commission (Harry G. Wiles, Chairman, Marion Beatty and Richard C. Byrd, Commissioners) having heard the evidence and examined the files and records, and thereby being fully advised in the premises, finds:

1. That on November 12, 1959, the Commission upon its own motion, ordered an investigation and hearing for the purpose of considering the adoption of a rule to require that companies take gas ratably from all wells in the same common source of supply to which they are connected. That notice of the time and place of said investigation and hearing was published on December 5, 1959, in the Topeka Daily Capital, and that a copy of such notice was mailed to all interested parties. Pursuant to notice, a public hearing was held on December 17, 1959, at the Lassen Hotel, Wichita, Kansas. Appearances were as follows:

(Appearances Omitted)

The hearing was adjourned for the purpose of receiving and disseminating proposals, until January 21, 1960, at which time the hearing reconvened. Appearances in addition to those

entered at the hearing of December 17, 1959, were as follows:

(Appearances Omitted)

2. That G.S. 1949, 55,703, as amended, imposes the following duty on this Commission:

"The commission shall so regulate the taking of natural gas from any and all such common sources of supply within this state as to prevent the inequitable or unfair taking from such common source of supply by any person, firm or corporation. * * *"

3. That for the purpose of facilitating such regulation, and thereby accomplishing the duty contemplated by the statute, it is necessary that the Commission promulgate and adopt a rule requiring all companies to take natural gas ratably from all wells within the same common source of supply to which they are connected.

4. That the Commission's staff and other parties have submitted proposals at the hearings, and subsequent thereto, which have been considered by the Commission.

5. That Exhibit "A", designated as Rule 82–2–219, meets the mandate of the statute and will enable the Commission to regulate production of natural gas in such a manner as to require companies to produce ratably from all wells within the same common source of supply to which they are connected; and that the Commission's General Rules and Regulations for the Conservation of Crude Oil and Natural Gas should be amended by adopting the proposed Rule as contained in Exhibit "A", and that said proposal should be designated Rule 82–2–219.

6. That Rule 82–2–219 is of statewide application and should therefore be filed with the Revisor of Statutes on February 8, 1960. This order and Rule 82–2–219, which is attached hereto as Exhibit "A" and made a part hereof, should be served upon all parties affected by this rule by first class United States mail. Further notice should be given by publishing this

order including Rule 82-2-219 in the official state paper, on February 8, 1960, and this rule shall become effective on February 8, 1960.

It Is, Therefore, by the Commission Ordered: That rule 82-2-219 be, and it is hereby, added to the Commission's General Rules and Regulations for the Conservation of Crude Oil and Natural Gas; and this order and Rule 82-2-219 be filed with the Revisor of Statutes on February 8, 1960, and shall also be in full force and effect on February 8, 1960.

And It Is Further Ordered: That this order and said rule, duly certified, be served upon all parties to be affected by first class United States mail and that further notice be given by publishing this order including Rule 82-2-219 in the Official State Paper, on February 8, 1960.

The Commission retains jurisdiction of the subject matter and the parties for the purpose of entering such further order or orders, and promulgating and implementing such further rules and regulations as from time to time it may deem proper.

By the Commission, It Is So Ordered.

WILES, *Chm.*
BEATTY, *Com.*
BYRD, *Com.*

APPENDIX C

Docket No. 51,488-C (C-4916). Conservation Division.

In the matter of Cities Service Gas Company, Colorado Interstate Gas Company, Hugoton Production Company, Kansas-Colorado Utilities, Inc., Kansas-Nebraska Natural Gas Company, Inc., Northern Natural Gas Company, Panhandle Eastern Pipe Line Company, Quinque Oil and Gas Production Company, United Carbon Company, Shallow Water Refining Company, to show cause.

REPORT AND ORDER ISSUED JANUARY 22, 1958

By The Commission:

1. This proceeding was initiated by the Commission by an order issued March 16, 1956, directed to purchasers of natural gas produced in the Kansas Hugoton Gas Field to show cause why they should not be required to take ratably from the various wells in the Hugoton Gas Field in the State of Kansas in order to prevent discrimination, uncompensated cognizable drainage, inequitable taking and waste as contemplated by the gas conservation statutes of the state.

2. A public hearing was duly held on March 30, 1958, at the Allis Hotel, Wichita, Kansas, at which appearances were entered on behalf of Cities Service Gas Company, Northern Natural Gas Company, Shallow Water Refining Company, Colorado Interstate Gas Company, Kansas-Nebraska Natural Gas Company, Inc., Panhandle Eastern Pipe Line Company, Kansas-Colorado Utilities, Inc., Hugoton Production

Company, Quinque Oil and Gas Production Company, United Carbon Company, Inc. (Maryland), United Carbon Company, Southwest Kansas Royalty Owners Association, intervenor, and the Commission. That at said hearing, this docket was consolidated for hearing purposes with Docket No. 51,342–C (C–4888) the market demand hearing for the Hugoton Gas Field for the proration period from April 1 to September 30, 1956; subsequently those dockets were consolidated for hearing purposes with subsequent market demand hearing dockets Nos. 53,042–C (C–5171), 54,220–C (C–5454) and 55,705–C (C–5792), all being heard on a common record. Further hearings were held on April 27, May 24, June 28, July 20, and August 30, 1956, April 23 and August 27 and 28, 1957, at which evidence and arguments were presented, at the close of which the matter was taken under advisement by the Commission.

3. Extensive public hearings have been held in these dockets. The transcript of proceedings and exhibits is voluminous. Pertinent facts established by the history of the field, Commission records and the transcript of proceedings herein will be briefly stated.

4. The question presented for determination in these proceedings is twofold; whether migration of gas may be occurring or is likely to occur from the Kansas portion of the Hugoton Gas Field to other portions of the field, remedial steps which may be and should be taken by the Commission to prevent loss of this valuable natural resource to Kansas and Kansas owners, and what corrective measures may be and should be taken by the Commission in performance of its statutory duty to prevent waste, protect correlative rights, and prevent unreasonable discrimination and inequitable withdrawals of gas from said field.

Evidence and Findings of Fact

5. The Hugoton Gas Field of Kansas, located in nine southwestern counties of the state, is a part of a large natural gas reservoir which extends south across the Oklahoma Panhandle and into Texas. The largest portion of the field is in Kansas. Gas is found in porous limestone and dolomite in the Hugoton Gas Field. The thickness of the gas producing horizons varies considerably and they are not uniform as to porosity or permeability.

6. Early development in Kansas, prior to proration, was in an area approximately 20 miles north of the Kansas-Oklahoma state line and in Oklahoma in an area from 10 to 25 miles south of said state line. As a result of this early development, areas of reduced pressures or "pressure sinks" were created surrounding the early wells. Later the areas of early development were connected by production so that by 1956 there were relatively few undrilled well locations.

7. The movement of gas within a common reservoir is governed by pressure differentials, the gas migrates from the areas of higher pressure to the areas of lower pressure. In its virgin state, the pressure within a common source of supply is the same, or practically the same, at all points. When gas is produced from a well, the pressure within the reservoir is reduced in the vicinity of the well bore. This causes gas in the formation to expand into the well. When a producing well is shut in, the pressure in the formation in the vicinity of the well will build up from that existing during production and this again tends to equalize the pressure within the formation and demonstrates that the continued migration of gas from high pressure to low pressure areas is occurring. Gas migrates within the reservoir from developed leases having higher pressure to other developed leases having lower pres-

sures in accordance with the same principles which govern the movement of gas from the formation into the several well bores. If the migration or drainage of gas across property lines is not equalized by counter-drainage, the developed leases so drained will not ultimately produce approximately the amount of gas underlying them. The extent of the movement of gas between developed leases depends upon the magnitude of variation in pressure existing as between developed leases, the areas contained in such leases and the amounts of gas withdrawn. (Hugoton Proration Order, paragraph *d.*)

Pressure History

8. The virgin shut-in wellhead pressure of the entire Hugoton reservoir was approximately 435 p.s.i.g. A study of the closed-in wellhead pressures by years reveals that by 1948 the arithmetic average closed-in wellhead pressure in the Kansas portion of the field was 385 pounds, while the corresponding figure for the Oklahoma portion of the field was 384 pounds, and the average pressure in the Texas portion of the field was 378 pounds. Until 1948, the pressure decline in the three states was about equal. But by 1954 the average wellhead pressure of Kansas wells was 366 pounds, a decrease of 19 pounds from 1948. At the same time the average Oklahoma wellhead pressure had declined to 340 pounds, a decrease of 44 pounds over the same period of time, while the Texas pressure had been reduced to 339 pounds, a decrease of 39 pounds. By 1956 the average wellhead pressure in Texas had decreased to 288 pounds, in Oklahoma to 316 pounds, while the Kansas average pressure was still as high as 356 pounds.

9. Pressure declines result from production of gas reserves and are also a measure of the rate of deple-

tion of gas reserves. The gas reserves in the Oklahoma portion of the reservoir are being depleted approximately twice as fast as the gas reserves in the Kansas portion of the reservoir and the gas reserves in the Texas portion of the reservoir are being depleted at an even higher rate. Evidence further indicates that if the present trend continues, the arithmetic average closed-in wellhead pressure p.s.i.g. for wells one mile each side of the Oklahoma-Kansas state line will be as follows:

	Kansas	Oklahoma
1958	322	315
1959	317	306
1960	312	298
1961	307	290
1962	301	282

10. Evidence presented at the hearings on these dockets indicates that at the present time pressure differentials do exist between developed leases in the southern portion of the Kansas Hugoton Field and leases in the northern portion of the Oklahoma Field. While the actual amount of drainage from the Kansas portion of the field to the Oklahoma portion of the field is not at the time cognizable, the evidence shows that this drainage will become cognizable within a period of three or four years unless the takes of gas from the Kansas portion of the field are increased in sufficient amounts to stop the increasing difference between the pressures in the Kansas field and the Oklahoma field.

Interim Order

11. During the course of the hearings herein, the Commission has issued its monthly proration orders and reports for the Hugoton Gas Field, denominated Interim Orders. Each of these orders issued for the month of April, 1956, and subsequent months through November, 1957, has contained the following finding:

"That an interim order should be entered herein determining a schedule of production allowable for wells in the Hugoton Gas Field for the month of (current month), but determinative of no other issue in the matter referred to above, now pending before the Commission."

12. In view of this clear and unequivocal language contained in the orders themselves, we interpret these orders to be final orders so far as they determined allowables for each month. As stated in the orders, they determined the monthly allowables, but were determinative of no other issue pending in the dockets. No one of the Interim Orders issued by the Commission from April, 1956, through October, 1957, has been contested.

Market Demand Factors To Be Considered

13. This Commission, as an arm of the State, has the power, in the interest of conservation, to enter such orders as may be necessary to prevent waste of natural resources and to protect correlative rights. The statute is clear that the Commission shall so regulate the taking of gas from any and all common sources of supply within the state as to prevent the inequitable or unfair taking from such common source of supply by any person, firm or corporation, and to prevent unreasonable discrimination in favor of or against any producer in any such common source of supply. The legislature said specifically that the Commission in promulgating rules, regulations and formulas to attain such results should take into consideration certain conditions and then added "and such other factors, conditions and circumstances as may exist in the common source of supply under consideration at the time as may be pertinent." (G.S. 1949, 55-703).

14. From the evidence presented, it is apparent to

the Commission that a determination of market demand based only on nominations reduced the allowables to a point where Kansas cannot produce the gas that could otherwise be produced in compliance with the basic order. It is necessary, therefore, that the Commission evolve a method of determining market demand and calculating allowables which will give effect to all the actual facts and conditions existing in the field rather than use solely the pipe line purchasers' nominations as the market demand.

15. In order for the Commission to properly administer and regulate the production of natural gas as required by statute the Commission must periodically determine the market demand for gas from the field. In addition to the general statutory duty imposed in this regard, the Hugoton Proration Order, in paragraph "o" thereof, made the following finding:

> "o. At such time and place as the Commission shall fix, the Commission will, after notice, conduct a hearing to determine the market demand for natural gas from said field for the next six succeeding proration periods, or for such other period of time as the Commission shall prescribe, and at said hearing may determine any other questions which may properly and legally come before the Commission for consideration thereat, and a new schedule of production allowable for the wells in said field, based upon the determination made as a result of such hearing, shall be prepared and promulgated for the ensuing proration periods."

16. A review of the Commission's past allowable orders and the evidence presented in these dockets discloses that heretofore the nominations by the purchasers from the Hugoton Field have been used and considered by the Commission as the market demand for the field. However, the evidence presented in

these dockets discloses that in many instances the aforesaid nominations did not approximate the market demand. Therefore the Commission finds that it is necessary, in determining the market demand for natural gas from the Hugoton Field, to consider, in addition to the nominations by the purchasers, the following factors:

(1) Takes from other sources of supply to which the purchasers are connected.

(2) The total markets for natural gas of all purchasers from the Kansas Hugoton Field; the rate of increase therein compared to the rate of increase in the takes from the Kansas portion of the Hugoton Field.

(3) Takes from other sources of supply in Kansas.

(4) Any other factors, conditions and/or circumstances that would aid the Commission in establishing the market demand.

Calculation of Allowables

17. The market demand figure, once obtained, heretofore was used to determine the current allowable to be assigned by the Commission to the field. Prior to May, 1956, the current allowable was determined by taking the market demand, first adding thereto the canceled underages for the previous month and then subtracting therefrom the amount of underproduction or adding thereto the amount of overproduction for the previous month. The result of the use of this method was that in actuality the runs or takes from the field controlled the amount of the current allowable; the control of the market demand and current allow..ble was entirely and exclusively in the hands of the purchaser pipe line companies, and not in the Commission.

18. The Commission, in an effort to take control, deviated from the formula of determining current allowables and for August, 1956, and subsequent months has fixed current allowables by taking the market demand figures, still based exclusively on nominations of the purchasers, and adding thereto the canceled underproduction for the previous month. Actually, except for the consideration of a small amount of canceled underproduction, the market demand, based solely on the nominations of the purchasers, was the current allowable for the field. The current allowable for each well was calculated in accordance with the provisions of paragraph (1) of the Basic Order for the Hugoton Gas Field. Each well continued to carry in addition to its current allowable such underproduction or overproduction as may have accrued to it. The result was the net allowable for each well. The sum total of the net allowables of the wells therein represented the net allowable for the entire field.

19. To restate this formula, allowables in the future will be determined as follows: Consider the factors as discussed in paragraph 16 above and arrive at the market demand figure; add to it the canceled underages, and the result will be the current monthly allowable. (This is the amount that is ratably apportioned to the wells each month.) To ascertain the net allowable for the field as a whole, add the total net underage or subtract the total net overage. The resulting figure is the field total net allowable on that date.

The field as a whole is never exactly in balance. It is to be expected that for some periods of time it will have a total net underage and for other periods of time it will have a total net overage.

20. The Commission finds that in order to prevent waste, protect correlative rights and effectively prorate gas from this field, it will determine market de-

mand as set out in paragraph 16 above and will continue to determine current and net allowables as set out in paragraph 19.

Balancing Period

21. A study of the history of the monthly proration orders for the Hugoton Gas Field from April, 1956, through November 1957, leads the Commission to the conclusion that their effect has been to put the field somewhat out of balance, and the Commission must take steps to restore balance to that field eventually or periodically. In order to accomplish this, the Commission recognized that it must prevent the excessive overproduction or excessive underproduction of the wells within the same common source of supply. Therefore the Commission, in Docket No. C-164, held a public hearing concerned with the advisability of amending paragraph "p" of the Hugoton Basic Proration Order and as a result of this hearing has restored a balancing period requiring the producers in the Hugoton Field to bring each well into balance at stated times as set out therein. The principle of the balancing period has been approved by this Commission numerous times in the past and the Supreme Court of the State of Kansas has at times in the past approved this principle.

22. Periodic balancing has the merit of preventing any wells from remaining excessively overproduced or excessively underproduced. It helps to enforce ratable takings as between all wells in the field. It also has the effect of encouraging producers and pipe line companies to produce and sell their total underages to companies in need of gas and encourage overproduced companies to buy from others to fill their needs.

23. In conformance with the views heretofore expressed, it is, therefore, ordered:

(1) That future determinations of market demand for natural gas from the Kansas Hugoton Field will give effect to the following factors, in addition to nominations of purchasers:

A. Takes from other sources of supply to which the purchasers are connected.

B. The total markets for natural gas of all purchasers from the Kansas Hugoton Field; the rate of increase therein compared to the rate of increase in the takes from the Kansas portion of the Hugoton Field.

C. Takes from other sources of supply in Kansas.

D. Any other factors, conditions and/or circumstances that would aid the Commission in establishing the market demand.

(2) That future monthly net allowables for natural gas for the Kansas Hugoton Field will be determined by adding canceled underages to the market demand figure as calculated above, and to that total add the total net underage or subtract the total net overage. (See paragraph 19.) The future current monthly allowable to be determined as set out in paragraphs 18 and 19.

(3) The Commission retains jurisdiction of the subject matter and the parties for the purpose of entering such further order or orders as from time to time it may deem proper.

(4) That this Report and Order shall take effect on February 1, 1958, and that the Secretary of the Commission shall mail copies thereof to all interested parties.

Marion Beatty, *Chairman,* Specially Concurring; Harry G. Wiles, *Commissioner;* Richard C. Byrd, *Commissioner,* Specially Concurring.

[SEAL] RAYMOND B. HARVEY, *Secretary.*

SPECIALLY CONCURRING OPINION

By Chairman Beatty

In our findings and Memorandum Opinion, we have reached three basic conclusions: They relate to (1) drainage, (2) determination of allowables and (3) balancing period.

(1) *Drainage*

The takes from the Hugoton Field as a whole, and its pressure history, indicate that although the drainage, if any, about which the intervenors complain is negligible at the present time, if the past and present rates of withdrawal from the Kansas portion of the Hugoton Field, as compared with rates of withdrawal from the Oklahoma portion of the Hugoton Field, continue in the future, there will be drainage of gas from the Kansas portion of the field to the Oklahoma portion thereof. We have made no findings or conclusions as to whether this drainage eventually will be moderate, considerable or devastating. The evidence was inconclusive.

The evidence in regard to the pressure pattern and drainage has been an education and I wish to call it to the attention of the Kansas Legislature for whatever remedial action, if any, the Legislature may see fit to take.

I specifically concur in the findings of fact we have made in regard to drainage, paragraphs 7 to 10 inclusive, but I for one, have never been satisfied that the present statutes give to this Commission the necessary power and authority to remedy this interstate situation, if a remedy there be.

(2) *Determination of Allowable*

The Commission has concluded that under the system of setting allowables for the Hugoton Field which

was in effect up until April, 1956, it was the pipe line companies that were in fact setting allowables for the Hugoton Field. The Commission had the practice of accepting pipe line companies' nominations as a starting point and if these proved to be over or under the actual runs, the market demand for the following month was adjusted accordingly so that the runs, which also were wholly controlled by the pipe line companies, actually were determining allowables.

I concur with the decision made herein to take not only nominations but certain other factors into consideration in setting these monthly allowables, as we have discussed in paragraphs 14 to 19, inclusive, above, so that the setting of allowables will henceforth be exercised by the State Corporation Commission rather than the industry to be regulated.

(3) *Balancing Period*

I wish to concur in the restoration of a balancing period as discussed in paragraphs 21 and 22 above. A balancing period was part of the original Basic Order for this field and one is included in most other such basic orders. It acts as a governor and helps to assure that each well will be produced ratably with other wells in the field.

DISCUSSION

Intervenors have urged us to continue the practice of setting high monthly allowables which was started by the Commission in April, 1956. They have asked us to increase the allowables 25% more even though the Commission since April, 1956, has been allowing somewhat more than the market actually absorbed. This benefited pipe line companies in need of gas, usually those over-produced. It was coercive on those who did not have proportional markets, those usually

underproduced. It has not been effective so far, but if and when it has the intended effect of forcing higher takes, it will allow the producers and royalty owners to convert their minerals into cash more quickly. The only visible results in the last nineteen months, however, has been no increase in takes and a gradually mounting net underage. The net allowable is now 52 million M.c.f. higher than the amount that will be actually taken and marketed this month, but if it is carried for awhile, the pipe line companies may find a market for it.

Since my tenure on this Commission, beginning ten months ago, I have been deeply concerned about what is a reasonable net overage or underage for the field and how far the net balance may fluctuate in either direction before the Commission would be obliged to check it. Testimony of the experts indicates that the present 52 million M.c.f. net underage is not a serious imbalance if the field is eventually brought into balance by increased takes or gradually reduced allowables. This was one of the considerations that caused the Commission to reject the request of some of the parties that we start over and recalculate the allowables for every month back through April, 1956.

I wish to point out that neither the Order and Memorandum Opinion unanimously adopted by the Commission nor the formula adopted necessarily commit this Commission to set artificially high allowables, or allowables at a figure which eventually will permit equalization of pressures between Kansas and Oklahoma, or allowables that will permit a program of planned depletion of the field in thirty years or any given number of years.

It is impossible to prorate the field to fit the pace of both those who want less and those who want

more gas. The result has to be somewhere in between and the Commission has some discretion.

If allowables are set high enough, or if high allowables continue long enough, admittedly the result will be to force underproduced pipe line companies to take and dispose of more Kansas gas or suffer cancellation of their underproduced allowables. The higher the allowables, the greater the coercion, the greater the cancellations and the more severe the penalties. I feel that the Commission needs a clearer mandate from the Legislature as its authority to execute this kind of a program for the purpose of forcing up the runs.

I am most heartily in favor of Kansas resources being harvested and marketed by Kansas people and Kansas industries, rather than by Oklahomans, and my sympathies are with the Kansas royalty owners, some of whom have had to sell their birthright to the pipe line companies for a mess of pottage (as low as 3 cents to 8 cents per M.c.f.) and are now having the pottage rationed to them in small spoonfuls, but whether we, a conservation commission, should try to force the sale and depletion of our natural gas at today's low prices, raises another question. Gas is a most desirable fuel. America's reserves of natural gas are being depleted one hundred times faster than our coal reserves. Aside from the question of our authority and jurisdiction to execute such a program under present conservation statutes, such a program may, in retrospect, prove to be very unwise, considering the welfare of the state as a whole.

MARION BEATTY, *Chairman.*

SPECIALLY CONCURRING OPINION

By Commissioner Byrd

I concur with the findings of fact as set forth in the Commission's report and order. I believe that provisions contained in the order relating to the determination of market demand and the factors to be considered in such determination, if realistically considered by the Commission in the future, can and will result in the prevention of drainage and the protection of correlative rights. However, because of the seriousness of the situation that would be presented by the extrapolation of the present rates of pressure decline of the wells in this field along the Oklahoma-Kansas state line, I feel that the Commission is justified at this time in taking more positive steps to prevent this situation from becoming a reality. The evidence presented indicated, and the Commission's report and order so finds, that based on the present rates of withdrawal from the Kansas and Oklahoma portions of the Hugoton Field, the average closed-in wellhead pressure for the wells in Oklahoma along the state line are decreasing and will decrease approximately 9 pounds per year; the wells in Kansas along the state line will decrease approximately 5 pounds per year. If those conditions continue to exist, in 1962 the arithmetic average closed-in wellhead pressure for the wells one mile on each side of the Kansas-Oklahoma state line will be 301 pounds in Kansas and 282 pounds in Oklahoma, a pressure differential of 19 pounds. With this differential in pressure, a serious drainage problem would exist.

The threat of this situation's existing is imminent and has been clearly called to the attention of the Commission. To avoid it, without undue hardships being imposed on the purchasers of gas, immediate

action must be taken. To delay the institution of preventive measures until this situation actually exists disregards the obligations imposed upon the Commission by the Gas Conservation Statute, particularly when we have been put on notice and are aware of the impending situation. The statutes grant this Commission broad powers. Should these powers not be sufficient to cope with this imminent threat of drainage, it is best that we become aware of this statutory deficiency before the drainage situation becomes a reality.

The evidence presented in these dockets shows that the demands for gas of the major gas purchasers in the Kansas Hugoton Field have increased substantially the last ten years. The total sales of gas by these companies has increased disproportionately with their withdrawals of gas in the Kansas Hugoton Field. All industry predictions are that the total demand for natural gas will continue to increase in the future. Based on this evidence, I believe the Commission is justified in determining at this time minimum allowables, based upon past and projected market demands of the gas purchasers, for the next 5 years. These minimum allowables should be determined now so that by the year 1962 the minimum allowables would permit the withdrawal of gas from the Kansas portion of the Hugoton Field at a rate equal to the withdrawal of gas from the Oklahoma portion of the Hugoton Field. In other words, the Commission should now establish a goal, and determine minimum allowables by year for the future, that will bring a halt to the steadily increasing pressure drop at the Kansas-Oklahoma state line by the year 1962.

Such a determination is not only justified by the evidence presented in these dockets, and required of us by the Statutes of Kansas, but would better able

the gas purchasers to adjust their takes of gas from the various sources of supply to which they are connected in order to meet their market requirements. If our goal is to prevent this future drainage situation, and I believe the Commission's order and report adopts that goal, then I believe the industry should be clearly informed of this intention. Accomplishment of that goal should be done in a method or manner least burdensome to the companies.

As I previously stated, I believe that the provisions of the Commission's order can accomplish the goal that is desired; however, the establishment of a planned depletion allowable as set forth above would, in my opinion, be a more effective means of accomplishing this end.

RICHARD C. BYRD, *Commissioner.*

APPENDIX D

NORTHERN NATURAL GAS COMPANY, HUGOTON FIELD ALLOWABLES AND RUNS FOR THE YEAR 1959*

1959	Republic Natural Gas Company "A"		Total	
	Current allowable	Runs	Current allowable	Runs
January	2,674,300	2,409,025	14,062,142	9,225,410
February	2,272,583	2,384,250	11,860,160	8,240,076
March	2,071,806	2,428,374	10,873,950	8,579,291
April	1,998,268	1,922,526	10,503,324	5,800,137
May	1,795,487	928,818	9,503,232	1,558,623
June	1,471,891	1,842,773	7,827,481	2,520,074
July	1,495,754	211,877	7,949,076	1,751,143
August	1,786,101	847,309	9,521,511	3,035,519
September	1,943,493	975,933	10,805,145	5,541,706
October	1,955,636	2,326,789	10,926,706	11,808,080
November	2,803,920	2,525,753	15,701,468	12,855,285
December	3,187,726	2,557,772	17,854,734	13,374,623
Total	25,456,127	21,941,199	137,461,578	84,229,577

F.P.C. CALCULATIONS BASED UPON ABOVE TOTALS

	Allowable	Runs	Percentage of allowable taken by Northern Natural Gas Company
Total:			
Kansas Hugoton	137,461,578	84,229,577	61.27
Republican Natural Gas Co. "A"	25,456,127	21,941,199	86.19
Other Companies	112,005,451	62,288,378	55.61

*Data from Kansas State Corporation Commission, Monthly Proration Orders and Reports.

APPENDIX E

Excerpt (p. 89D) From Report of Northern Natural Gas Company to the Federal Power Commission (FPC Form 2) for 1959.

NORTHERN NATURAL GAS COMPANY

Gas Purchased (Account 745) 1959

Name of vendor (designate associated companies) (a)	Point of receipt (b)	Seller's FPC rate schedule designation (c)	Date of contract (c)	Approx. BTU per cu. ft. (d)	Pressure base (e)	M.C.F. of gas (f)	Amount (g)	Average amount per M.C.F. (cents) (h)
Kansas Hockett System:								
Various Vendors (3 Contracts)	Well Mouth				14.65#	304,469	$45,670	15.0
Kansas Hugoton System:								
Northern Natural Gas Producing Co. (Note 1).	Well Mouth	2	11- 1-52	987	14.65#	25,891,029	2,814,982	11.0
Nathan Appleman, et al	" "	6	10-14-57	735	14.65#	309,283	33,031	11.0
Barlu Oil Corporation	" "	1	11- 1-54	Note 2	14.65#	574,160	63,158	11.0
Barlu Oil Corporation	" "	4	4- 8-57	751	14.65#	618,701	68,057	11.0
Colorado Oil and Gas Corporation	" "	22	7-25-44	957	14.65#	241,578	26,574	11.0
Colorado Oil and Gas Corporation	" "	27	2-21-45	967	14.65#	331,095	36,420	11.0
Cities Service Oil Company	" "	70	9- 9-49	968	14.65#	11,401,253	1,368,109	12.0
Champlin Oil and Refining Company	" "	41	5-31-50	Note 2	14.65#	419,627	46,159	11.0
J. R. LeBosquet and H. M. Gillespie	" "	6	10- 1-49	956	14.65#	386,692	42,536	11.0
Graham-Michaelis Drilling Company	" "	8	4-30-55	Note 2	14.65#	334,619	36,808	11.0
Gulf Oil Corporation	" "	117	3- 6-47	915	14.65#	1,850,343	203,538	11.0
Hugoton Plains Gas and Oil Company	Gasoline Plant near Liberal, Kansas.	1	9-15-49	Note 2	14.65#	977,528	107,528	11.0
Kansas Nebraska Natural Gas Company	Well Mouth	Unknown	4-15-40	984	14.65#	447,251	49,198	11.
Alfred D. McKelvy	" "	1	3-20-57	704	14.65#	820,381	90,242	11.
Petroleum, Inc. et al	" "	5	3-23-56	778	14.65#	447,464	49,185	11.
Republic Natural Gas Company	" "	9	9-13-45	1028	14.65#	8,924,749	893,379	15.
Republic Natural Gas Company	" "	8	12-21-45	1020	14.65#	21,936,851	4,272,421	19.

Saturn Oil and Gas Company, Inc.	" "	2	12- 1-51	1020	14.65#	408,344	44,953	11.0
Texaco, Inc. (formerly The Texas Co.)	" "	111	5-23-45	976	14.65#	543,000	59,730	11.0
The Trees Oil Company	" "	2	7- 9-45	965	14.65#	613,019	67,432	11.0
Texaco, Inc. (formerly The Texas Co.)	" "	129	2- 9-55	1016	14.65#	955,877	114,705	12.0
Texaco, Inc. (formerly The Texas Co.)	" "	147	2- 9-56	Note 2	14.65#	3,198,198	351,518	11.0
Helmerich and Payne, Inc. (formerly White Eagle Oil).	" "	4	10- 1-50	Note 2	14.65#	766,010	94,261	11.0
Various Vendors (94 Contracts)	" "			Note 2	14.65#	4,424,382	487,016	11.0
Total Kansas Hugoton System						83,512,434	11,411,240	13.7
Kansas Hugoton Deep Gas System (2 Contracts)	Well Mouth				14.65#	152,493	20,355	13.3
Kansas McKinney Fincham System:								
The Atlantic Refining Company	Well Mouth	175	7-15-57	1098	14.65#	1,310,879	183,823	14.0
Graham-Michaelis Drilling Company	" "	2	10- 5-56	1108	14.65#	374,741	52,464	14.0
General American Oil Company of Texas	" "	29	4- 4-55	1097	14.65#	210,196	26,275	12.5
Monsanto Chemical Company	" "	23	4- 3-57	Note 2	14.65#	193,731	31,526	16.3
Various Vendors (8 Contracts)	" "			Note 2	14.65#	351,980	51,339	14.6
Total Kansas McKinney Fincham System						2,441,527	345,127	14.1
Kansas Otis System:								
Various Vendors (8 Contracts)	Well Mouth				14.65#	52,576	1,950	3.7
Kansas Pleasant Valley System:								
Graham-Michaelis Drilling Company	Well Mouth	3	3- 1-57	1021	14.65#	178,398	26,760	15.0
Skelly Oil Company	" "	114	2- 6-57	1020	14.65#	84,476	12,671	15.0
Total Kansas Pleasant Valley System						262,874	39,431	15.0
Kansas Skelly System:								
Various Vendors (5 Contracts)	Well Mouth			Note 2	14.65#	296,517	39,001	13.2
Kansas McElwain System:								
Various Vendors (2 Contracts)	Well Mouth			Note 2	14.65#	39,364	4,845	12.3
Total Gas Purchased						463,115,859	73,333,607	15.8

APPENDIX F

Estimated Cost Impact on Northern Natural, if Kansas Corporation Commission Order Had Been in Effect in 1959

1. *Basic Data*

A. Average Cost of Gas to Northern—1959—as actually incurred. (Data taken from page 89D, Northern Natural Gas Co., Form No. 2, 1959 (Appendix E, p. 56).

Kansas Hugoton Field

	Mcf (col. (f))	Amount (col. (g))	Aver. amount computed from cols. (f) and (g) per Mcf
(1) Total Kansas Hugoton System	83,512,434	$11,411,240	13.664121¢
(2) Less Republic Natural (F.P.C. Rate Sched No. 8)	21,936,851	4,272,421	19.476000¢
(3) Other Kansas Hugoton	61,575,583	$7,138,819	11.593587¢

Total 1959 Gas Purchases

(Data taken from page 89E, Form No. 2)

(4) Total Northern Supply (Acc't 745)	462,763,011	$73,264,037	15.831870¢
(5) Less Kansas Hugoton ((1) above)	83,512,434	11,411,240	13.664121¢
(6) Supply, other than Hugoton	379,250,577	$61,852,797	16.309216¢

B. Kansas Hugoton Allowables and Production (from Appendix D).

	Allowables—Mcf	Produced Mcf	Percent (Allow. to Prod.)
(7) Other Hugoton	112,005,451	62,288,378	55.61
(8) Republic A	25,456,127	21,941,199	86.19
(9) Total Hugoton	137,461,578	84,229,577	61.275

C. Comparison of production figures derived from F.P.C. Form 2 (Set forth in Appendix E and sum-

marized in (1), (2), and (3), *supra*, this Appendix) with similar figures derived from Kansas Commission proration reports (set forth in Appendix D and summarized in (7), (8), (9), *supra*, this Appendix.)

	Form No. 2	*Above figures*
(10) Other Hugoton	61,575,583	62,288,378
(11) Republic A	21,936,851	21,941,199
(12) Total Hugoton	83,512,434	84,229,577

The reason for the variance is not apparent, but the slight difference has no significant effect on results. In the calculations that follow, adjustments to Northern's actual Form No. 2 gas supply and costs will be based upon the ratio of production to allowable derived in B above for determination of dollar impact.

D. Adjusted Kansas Allowables, Based upon Produced Volumes Shown in Northern's Form No. 2.

(13) 83,512,434 (Ref (1)) ÷ 0.61275 (Ref (9)) = 136,291,200 Mcf
Total Allowables

(14) 136,291,200 Mcf (Ref (13)) × 0.8619 (Ref (8)) = 117,469,385 Mcf
Total Hugoton purchase at Republic "A" rate of 86.19%.

	Allowables	*Ratio, allowables to total allowables*
(15) Other Hugoton (Ref (7))	112,005,451	0.8148128
(16) Republic A (Ref (8))	25,456,127	0.1851872
(17) Total Kansas-Hugoton (Ref (9))	137,461,578	1.0000000

Adjusted allowables

(18) Other Hugoton—0.8148128 (Ref (15)) × 136,291,200 (Ref (13))
= 111,051,814 Mcf

(19) Republic A—0.1851872 (Ref (16)) × 136,291,200 (Ref (13))
= 25,239,386 Mcf

111,051,814 (Ref (18)) + 25,239,386 (Ref (19)) = 136,291,200 (Ref (13))

2. Estimated 1959 Cost of Gas to Northern if Northern Had Taken at Same Percentage of Allowables From All Wells as From Republic A (86.19%, Ref (8)).

Adjusted Hugoton Gas Balance

	Mcf
Total Hugoton Purchase (Ref (14))	117,469,385
Less Republic A (Ref(2))	21,936,851
(20) Other Hugoton Purchase	95,532,534

Adjusted Total Gas Balance

	Mcf
Total Purchase (Ref(4))	462,763,011
Less Hugoton Purchase (Ref(14))	117,469,385
(21) Outside Hugoton Purchase	345,293,626

Adjusted Cost of Gas

	Mcf (Ref) (a)	Cents per Mcf (Ref) (b)	Amount (a) × (b) or (Ref.)
Republic A	21,936,851((2))	19.476((2))	$ 4,272,421((2))
Other Kansas-Hugoton	95,532,534((20))	11.5934587((3))	11,075,649
Other Purchases	345,293,626((21))	----------	61,852,797((6))
Total	462,763,011((4))	----------	$77,200,866
Less Actual Payment			73,264,037((4))
Increase			$ 3,936,829

3. Estimated 1959 Cost of Gas to Northern if Northern Had Taken at Same Percentage of Allowables From All Wells as the 1959 Actual Field Average (61.275, Ref (9)).

Adjusted Hugoton Gas Balance

	Mcf	
(22) Other Hugoton 0.61275×111,051,814 (Ref(18))	68,047,000	
(23) Republic A 0.61275×25,239,386 (Ref(19))	15,465,434	
Total (Ref(13))	83,512,434	(Ref(1))

Adjusted Cost of Gas

	Mcf (Ref) (a)	Cents per Mcf (Ref)	Amount (a) × (b) or (Ref.)
Other Hugoton	68,047,000((22))	11.593587	$ 7,889,088
Republic A	15,465,434((23))	----------	4,272,421((2))
Other Purchases	379,250,577((6))	----------	61,852,797((6))
Total Purchase	462,763,011((4))	----------	$74,014,306
Less Actual Payment			73,264,037((4))
Increase			$ 750,269

APPENDIX G

NORTHERN NATURAL GAS COMPANY

F.P.C. Docket No. CP 62–85

Supplement to application, filed June 19, 1962

United States of America Before the Federal Power Commission

Docket No. CP62–85

IN THE MATTER OF NORTHERN NATURAL GAS COMPANY

SECOND SUPPLEMENT TO APPLICATION

Comes now. Northern Natural Gas Company (Northern) Applicant in the above-designated docket and supplements its Application in response to the Commission's letter of April 18, 1962.

I.

The Commission's letter of April 18, 1962 requested Northern to file certain additional data respecting Northern purchases of gas during the year 1960. Attached hereto is a tabulation by gas fields setting forth the minimum volumes required to be purchased, the actual volumes purchased, the dollar amount paid for such gas and the average price per Mcf together with explanatory notes. Additional data respecting the provisions of individual gas purchase contracts has been supplied to the Staff of the Commission in the form of a detailed summary of gas purchase contracts.

Also attached hereto is a gas balance for the year 1960 indicating the total volumes of gas received and the disposition of such volumes.

As the attached tabulation demonstrates, the total volume of gas purchased by Northern during 1960 was apportioned quantitatively among the several gas sources. In general, the particular quantity of gas which was purchased from a particular gas source was determined by contractual obligations between the owner of such gas as seller and Northern as buyer. Northern's contractual obligations with the many owners of gas differed considerably and included obligations to take or pay and obligations to take. These two types of obligations further related to taking specific volumes of gas at specific times, taking volumes of gas determined from the estimation of reserves underlying the property, taking allowable volumes of gas, taking volumes of gas ratably with other purchasers, taking volumes of gas ratably with other volumes purchased by Northern, taking volumes of casinghead gas produced with oil and other varying obligations to take gas. Thus, from Fields other than Kansas Hugoton and excluding takes from Permian Basin Pipeline Company, Northern's gas purchases during 1960 were on the basis of the minimums required under the various contracts. The difference between Northern's total requirements and the minimum contract volumes required to be taken from areas other than Kansas Hugoton was taken from Kansas Hugoton. The total volume purchased by Northern from Permian during these periods was limited to the volume which Permian was certificated to sell and deliver to Northern.

Wherefore, Northern respectfully prays as in its Original Application and requests the Commission promptly to issue a certificate of public convenience

and necessity as requested in its Application as Amended and Supplemented.

Respectfully submitted,

NORTHERN NATURAL GAS COMPANY,

By [S] E. B. BLEASE,

Vice President.

Dated: June 19, 1962.

LAWRENCE I. SHAW
F. VINSON ROACH
DANIEL B. O'BRIEN, Jr.
2223 Dodge Street
Omaha 1, Nebraska
JUSTIN R. WOLF
CHARLES A. CASE, Jr.
1625 K Street NW.
Washington 6, D.C.
Attorneys for Northern Natural Gas Company.

STATE OF NEBRASKA, COUNTY OF DOUGLAS, *ss:*

E. B. Blease, of lawful age, being first duly sworn on oath, states that he is Vice President of Northern Natural Gas Company; that he has read the foregoing Second Supplement to Application and knows the contents thereof; and that the facts set forth therein are true as he verily believes.

[S] E. B. BLEASE, *Vice President.*

Subscribed and sworn to before me this 19th day of June, 1962.

[S] PATRICIA A. WARNER, *Notary Public.*

NORTHERN NATURAL GAS COMPANY

F.P.C. Docket No. CP 62-85

Tabulation of 1960 Gas Purchases for Northern, referred to at p. 62, *supra.*

NORTHERN NATURAL GAS COMPANY

1960 GAS PURCHASES

MCF @ 14.73⁰

System	Minimum volume required to be purchased *	Volume purchased	Amount paid	Average price per MCF
Field				*Cents*
North Hutchinson System—Texas:				
Southland Royalty Field	1,020,369	1,020,369	$170,899.84	16.800
North Hutchinson (White Lime) Field	361,827	361,827	60,692.01	16.782
North Hutchinson (Douglas) Field	340,284	340,284	46,698.05	13.158
North Hutchinson (Marmaton) Field	946,215	946,215	124,471.18	13.155
North Hutchinson (Upper Douglas) Field	226,680	226,680	31,547.65	13.922
North Hutchinson (Cleveland) Field	313,529	313,529	45,037.69	14.365
System total	3,128,045	3,128,045	457,436.22	14.624
Kirk System—Texas:				
John Creek Field	273,881	273,881	46,437.17	16.500
Spearman-Honolulu System—Texas:				
Bernstein, Morrow, Upper Field	1,551,694	1,551,694	265,149.99	15.992
Hansford, North, Douglas Field	388,106	388,106	57,888.96	15.643
Hansford, North, Tonkawa Field	4,437,962	4,437,962	714,611.14	16.139
Hansford, North, Low Pressure Morrow, Field	61,547	61,547	10,210.70	16.590
Hansford, North, Morrow Field	2,403,740	2,403,740	388,792.46	16.173
Hansford, Upper Morrow Field	17,564,835	17,564,835	2,901,074.15	16.516
Hansford, Middle Morrow Field	995,467	995,467	163,990.86	16.500
Hansford, Lower Morrow Field	6,294,563	6,294,563	1,017,495.61	16.169
Lipe, Morrow Field	1,747,076	1,747,076	288,841.53	16.530
East Spearman Field	838,645	838,645	142,615.89	16.500
Twin Tonkawa Field	44,496	44,496	7,381.92	16.590
Hitchland, 6900' Field	545,712	545,712	90,894.69	16.500
Farnsworth, Upper Morrow Field	30,377	30,377	5,039.57	16.590
Hansford, Marmaton Field	194,570	194,570	32,289.69	16.590
Horizon, Cleveland Field	1,826,417	1,826,417	303,094.69	16.590
Horizon, Upper Morrow Field	44,998	44,998	7,468.57	16.590
Spearman, East Atoka Field	17,998	17,998	2,984.88	16.580
Miscellaneous Fields	10,535,950	10,535,950	1,792,288.14	16.449
System total	49,718,373	49,718,373	8,165,429.78	16.423
Blank System—Texas:				
Blank Area	286,186	286,186	47,478.31	16.590
Northrup System—Texas:				
Northrup Field	894,988	894,988	144,984.82	16.192
Dude Wilson, Hepler Field	101,716	101,716	16,874.76	16.590
Dude Wilson, Atoka Field	90,151	90,151	14,956.13	16.590
Dude Wilson, Marmaton Field	3,867	3,867	644.88	16.590
Dude Wilson, Lower Morrow Field	238,807	238,807	39,560.57	16.562
Ellis Ranch Field	102,990	102,990	16,852.44	16.657
Miscellaneous Fields	315,188	315,188	52,798.99	16.353
System total	1,750,532	1,750,532	288,270.57	16.363

NORTHERN NATURAL GAS COMPANY—Continued

System	Minimum volume required to be purchased	Volume purchased	Amount paid	Average price per MCF
Field				Cents
Perryton System—Texas and Oklahoma:				
Perryton, Lower Morrow Field	2,086,886	2,086,886	$342,337.17	16.187
Perryton, Douglas Field	6,027	6,027	939.29	15.585
Perryton, Keyes Field	240,691	240,691	37,510.60	15.588
Perryton, West, Morrow Field	1,567,079	1,567,079	245,623.96	15.674
Perryton, Lower Novi Field	196,512	196,512	30,625.70	15.585
Perryton, Upper Morrow Field	253,614	253,614	42,074.78	16.590
Canyick Field	351,640	351,640	56,222.26	16.071
Dower Field	2,077,310	2,077,310	325,779.59	15.683
Miscellaneous Fields	1,418,150	1,418,150	228,945.40	16.145
System total	8,167,909	8,167,909	1,300,159.07	15.918
Elmwood-Camp Creek System—Oklahoma:				
Mocane, Morrow Field	290,966	290,966	47,963.51	16.482
Six Mile, Morrow Field	275,620	275,620	43,754.93	15.878
Mocane, Tonkawa Field	1,544,807	1,544,807	257,213.87	16.650
South Mocane, Morrow Field	419,471	419,471	71,989.39	17.159
Elmwood, Morrow Field	714,971	714,971	124,989.31	17.479
System total	3,245,887	3,245,887	545,832.01	16.816
Eyer System—Oklahoma:				
Eyer Area	88,536	88,536	14,640.89	16.537
Ridgeway System—Oklahoma:				
Mocane, Chester Field	545,219	545,219	88,253.89	16.187
Mocane, Tonkawa Field	119,184	119,184	20,091.03	16.857
System total	664,403	664,403	108,344.62	16.307
Highland System—Oklahoma:				
Laverne, Council Grove Field	12,036	12,036	2,067.29	17.093
Laverne, Hoover Field	586,458	586,458	100,242.23	17.098
Laverne, Morrow Field	105,890	105,890	18,089.59	17.080
Laverne, Chester Field	36,257	36,257	6,197.36	17.093
Laverne, Tonkawa Field	161,549	161,549	27,613.29	17.093
System total	902,190	902,190	154,209.75	17.093
Glenwood-Gate Lake System—Oklahoma:				
South Glenwood, Chester Field	2,112,441	2,112,441	352,250.78	16.675
South Glenwood, Morrow Field	1,429,948	1,429,948	239,915.88	16.778
Northwest Doby Springs, Chester Field	1,716,532	1,716,532	282,499.60	16.458
Northwest Doby Springs, Morrow Field	80,042	80,042	13,176.23	16.465
System total	5,338,963	5,338,963	887,842.49	16.630
Glenwood, Northeast System—Oklahoma:				
Glenwood, Northeast Field	41,284	41,284	4,078.86	9.880
McKinney-Fincham System—Kansas:				
McKinney Field	2,183,823	2,183,823	308,004.75	14.012
Fincham Field	394,156	394,156	65,071.56	16.507
System total	2,577,979	2,577,979	371,076.31	14.394

NORTHERN NATURAL GAS COMPANY—Continued

System	Minimum volume required to be purchased	Volume purchased	Amount paid	Average price per MCF
Field				*Cents*
Harper Ranch System—Kansas:				
Harper Ranch Field	4,274,293	4,274,293	$624,677.31	14.615
Northeast Morrison Field	297,315	297,315	44,840.71	15.082
System total	4,571,608	4,571,608	669,518.02	14.645
Stredtman System—Kansas:				
Cavalry Creek Field	19,298	19,298	2,425.40	12.568
Hockett System—Kansas:				
Hockett Field	170,849	170,849	25,767.10	15.082
Pleasant Valley System—Kansas:				
Pleasant Valley Field	356,773	356,773	53,806.15	15.082
McElwain System—Kansas:				
Joy Field	17,396	17,396	2,233.37	12.839
Shelly-Embry Systems—Kansas:				
Embry-Edstaff, Mississippian Field	390,918	390,918	44,813.02	11.465
Embry-Edstaff, Misner Field	465,989	465,989	59,172.83	12.977
Embry-Edstaff, Basal Pennsylvanian Field	82,417	82,417	11,187.08	13.574
Belpre Field	154,906	154,906	20,908.42	13.554
System total	1,094,230	1,094,230	136,169.35	12.559
Benson System—Kansas:				
Benson Area (Casinghead)	497,792	497,792	62,088.26	12.473
Hugoton-Deep (Oklahoma) System:				
Calvert Area	29,689	29,689	4,470.15	15.062
Hicks Area	123,697	123,697	14,924.70	12.066
South Hovey Field	257,079	257,079	31,017.94	12.066
Richland Center Field	693,433	693,433	83,666.36	12.066
System total	1,103,848	1,103,848	134,079.15	12.147
Hugoton-Deep (Kansas) System:				
Greenwood Field	176,084	176,084	23,283.53	13.197
Rolla Field	44,586	44,586	5,379.53	12.066
Salley Area	93,307	93,307	11,256.08	12.066
Wilburton Field	91,228	91,228	12,219.03	13.394
Wide Awake Field	52,402	52,402	8,430.08	16.088
Panoma Field	5,681	5,681	599.60	11.681
System total	462,638	462,638	61,080.05	13.203
Camrick System—Oklahoma:				
Camrick Field	12,385,921	12,385,921	2,379,902.24	19.215
Permian Basin Pipeline Company	171,728,011	171,728,011	34,313,397.66	19.981
Panhandle System:				
West Panhandle Field	83,389,684	83,389,684	7,796,688.21	19.981
Sunray System:				
Sunray Area	37,732,046	37,732,046	4,619,132.19	12.242
Hugoton—Shallow (Oklahoma) System:				
Hugoton Field	31,060,016	31,060,016	4,391,298.12	13.949
Hugoton—Shallow (Kansas) System:				
Hugoton Field	(b)	121,757,771	14,448,696.90	11.868
Grand total	511,322,007	511,322,007	81,411,850.81	15.916

EXPLANATORY NOTES

[a] Recently, when Northern has been experiencing a temporary imbalance between purchase commitments and market requirements, it has followed a policy of purchasing minimum quantities of gas under its numerous gas purchase contracts. The minimum quantity of gas to be purchased during a particular period of time under individual contracts is, however, substantially influenced by numerous factors. For example, Northern's obligation to purchase gas:

(1) in certain cases in specific volumes; and

(2) in other cases in specific volumes at the outlet of specified gasoline plants; and

(3) in other cases on a ratable basis with all other gas purchased by Northern; and

(4) in other cases on a ratable basis with other gas purchased by Northern after excluding volumes purchased from another supplier, the priority of which was agreed to by the ratable Seller; and

(5) in other cases on only a reserve basis; and

(6) in other cases on the greater of:

(i) a reserve basis; or

(ii) ratably with Northern's purchases from others in the same common reservoir; and

(7) in other cases on the greater of:

(i) a reserve basis; or

(ii) ratably with Northern's purchases from others in the same common source of supply; or

(iii) ratably with other pipelines' purchases from others in the same common source of supply;

In many instances has been altered by the proration of production by state regulatory agencies, whereby the volume of gas to be purchased is determined by standards other than as written in the contract. Further, many of Northern's contracts provide for attainment of the purchase obligation over the period of a contract year which does not coincide with a calendar year. For these reasons and because of fluctuating market demands, during any given calendar year the volume of gas purchased under a given contract may be greater or less than the written contractual obligation depending upon whether the volume of gas to be purchased was influenced by proration and or other factors such as prior under purchases or prior over purchases. Accordingly, in Northern's judgment, the volumes of gas listed in this column are, within practical and reasonable limits of prudent operations or for reasons beyond the control of Northern, the minimum volumes required to be purchased during the calendar year 1960.

[b] (i) All of Northern's gas purchase contracts in this Field, except its "A" Contract with Republic Natural Gas Co. (now Socony Mobil Oil Co., Inc.) dated 12-21-45, provide that Northern will purchase gas from Sellers thereunder ratably with all natural gas purchased by Northern from such Field over reasonable periods of time, subject however, to Northern's prior obligation to purchase specified volumes of gas under said Republic "A" Contract.

(ii) The Republic "A" Contract, as written, provides that Northern would purchase thereunder 60% of the gas requirements of its "Omaha District," as therein defined, up to a total of 36,500,000 Mcf (16.4%) (which equates to 40,860,067 Mcf or 14.7%) annually. Sixty per cent of such Omaha District now and for many years past has far exceeded said 36,500,000 Mcf annually. It is Northern's position that the Kansas Supreme Court, in the case of *Northern Natural Gas v. Republic Natural Gas Co.*, 172 Kan. 450, 241 P. 2d 708, determined that Northern fulfills its obligation to purchase under this Contract when it purchases the legal net allowables of the Republic "A" wells. It is Northern's further position that the "ratable take" orders issued by the Kansas Corporation Commission limit the volume of gas Northern may lawfully purchase from the wells under this Contract to such wells' ratable share of Northern's actual market requirements from this Field.

Republic has commenced two actions (Cases No. 4165 and No. 4235) in the District Court of Stevens County, Kansas, alleging breaches of said "A" Contract during the period from July 1, 1955 to June 30, 1961, and seeking recovery of damages totaling approximately $26,000,000. In addition to a claim for punitive damages, Republic seeks recovery of $15,649,948.26 representing the difference between the volumes actually purchased by Northern and the claimed contractual

obligation to purchase 36,500,000 Mcf (16.4#) of gas annually. Alternatively to the $15 million plus damages sought, Republic seeks recovery of $1,689,402.99 which represents the difference between the allowable granted to the Republic "A" wells and the volume of gas purchased by Northern therefrom during the contract years commencing July 1, 1959 and July 1, 1960, during which years the "ratable take" orders issued by the Kansas Corporation Commission were effective.

(iii) Although Northern has no contractual obligation to purchase minimum volumes under its other ratable contracts (see Note (i) above), if Northern must purchase either (1) 40,860,067 Mcf annually or (2) the legal net allowable under the Republic "A" Contract (see Note (ii), above) and purchase ratably under these other contracts in accordance with the "ratable take" orders of the Kansas Corporation Commission, then the minimum volume required to be purchased under the ratable contracts during 1960 would have been (1) 183,791,448 Mcf or (2) 118,843,155 Mcf.

(iv) If the "ratable take" orders of the Kansas Corporation Commission referred to in Note (ii) limit the volume of gas Northern may lawfully purchase from the wells under each of its contracts to such wells' ratable share of Northern's actual market requirements, then the minimum volume required to be purchased by Northern during 1960 would have been equal to the volume actually purchased, namely 121,557,771 MCF.

If Northern was obligated to purchase 40,860,607 MCF under the Republic "A" Contract (see Note (ii)) and purchase ratably under all its other contracts in accordance with said "ratable take" orders of the Kansas Corporation Commission, then the minimum volume required to be purchased under all contracts during 1960 would have been 224,651,515 (183,791,448 (see Note (iii)) plus 40,860,067).

If Northern was obligated to purchase the 1960 current allowable of 26,420,972 MCF as assigned by the Kansas Corporation Commission to the wells under the Republic "A" Contract, if such allowable is legal, and purchase ratably under all its other contracts in accordance with said "ratable take" orders of the Kansas Corporation Commission, then the minimum volume required to be purhased under all its contracts during 1960 would have been 145,264,127 MCF (118,843,155 (see Note (iii)) plus 26,420,972 MCF).

U.S. GOVERNMENT PRINTING OFFICE: 1963